Linnæus University

Course syllabus

Board of Education Science
School of Computer Science, Physics and Mathematics

1MD371 Matematikdidaktik fördjupning - elever i matematiksvårigheter, 7,5 högskolepoäng

Advanced Didactics of mathematics - Children in Difficulties in Mathematics, 7.5 credits

Main field of study
Mathematics

Subject Group
Mathematics

Level of classification
First Level

Progression
G1F

Date of Ratification
Approved by the Board of the School of Computer Science, Physics and Mathematics 2009-08-11

Revised 2010-02-12. Revision made for type of instruction and literature list

The course syllabus is valid from spring semester 2010

Prerequisites
General admission requirements for students within the programme, as well as passed one of the specialisations in mathematics/mathematical didactics.
This course is offered as a single subject course to students who have passed 15 hp mathematical didactics, The Pupil's Learning and Concept Development in Mathematics, 7,5 Higher Education Credits (1MD301), and either Mathematical Didactics - Starting with Mathematics, 7,5 credits (1MD311), or Mathematical Didactics - Learning and Teachers' role, 7,5 credits (1MD312), or the equivalent.

Expected learning outcomes

Having completed the course the student is expected to

- identify, with the help of a diagnosis, a pupil’s difficulties in mathematics.
- be able, after diagnosing a pupil’s ability in mathematics, to plan, carry out and evaluate teaching for a pupil experiencing difficulties in mathematics.
- be able to analyse as well as present both in speech and writing the content of current research into mathematical difficulties.

Content

The course covers the following areas:

- field studies in the form of identifying, teaching and evaluating pupils experiencing difficulties in mathematics
- the influence of the ways and means of working on the pupils' learning situation.
- pupils experiencing difficulties in mathematics
- reading and writing difficulties and learning mathematics.
- educational aids in teaching mathematics.
- orientation in the current research into difficulties in mathematics.

Type of Instruction

Teaching may consists of lectures, seminars and field studies. Attendance at all forms of teaching is obligatory.

Examination

The course is assessed with the grades Fail (U) or Pass (G).
On request, students may have their credits translated to ECTS-marks. Such a request must be sent to the examiner before the grading process starts.

The course is examined through active participation at seminars, methodology sessions and presentations, as well as through a written exam and written and verbal presentations of individual tasks and group assignments.

Course Evaluation

After the course a written evaluation of the course will take place according to the University guidelines.

Required Reading and Additional Study Material

Required reading

Butterworth, B & Yeo, D, *Dyskalkyli - att hjälpa elever med specifika matematiksvårigheter*,
Natur och kultur, 2009. 124 sidor

McIntosh, A, *Förstå och använda tal - en handbok*,
NCM, Göteborgs universitet, 2008, 200 pages.

Malmer, G, *Bra matematik för alla, nödvändig för elever med inlärningssvårigheter*,
Studentlitteratur, 1999. 240 pages.

Sterner, G & Lundberg, I,
Dyskalkyli -finns det? ,
NCM, Göteborgs universitet, 2009 96 sidor.
Sterner, G & Lundberg, I,
Läs- och skrivsvårigheter och lärande i matematik,
NCM-rapport 2002:2. 201 pages.

DFM, *Compendium*, Linnæus University, current year.100 pages.